L5 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:695729 CAPLUS
DOCUMENT NUMBER: 137:231345
TITLE: Immunogenic compositions comprising MHC epitopes of PSMA, VEGFR2 and fibronectin for use as anti-neovasculature and cancer therapy
INVENTOR(S): Simard, John J. L.; Diamond, David C.
PATENT ASSIGNEE(S): CTL Immunotherapies Corp., USA; Mannkind Corp.
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002069907	A2	20020912	WO 2002-US7204	20020307 <--
WO 2002069907	A3	20030213		
WO 2002069907	A8	20040212		
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PRIORITY APPLN. INFO.:			
US 2001-274063P	P	20010307
EP 2002-715085	A3	20020307
US 2002-94699	A1	20020307
WO 2002-US7204	W	20020307

AB Disclosed herein are immunogenic compns., methods of designing immunogenic compns., methods of treatment using immunogenic compns., methods of evaluating cell-mediated immunity resulting from immunogenic compns., research models, and methods of making research models, all of which relate to targeting tumor vasculature. The antitumor compns. comprise cytotoxic T lymphocyte epitopes derived from prostate specific membrane antigen, vascular epithelial growth factor or ED-B domain of fibronectin.

IT **457998-20-8**
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; immunogenic compns. comprising MHC epitopes of PSMA, VEGFR2 and fibronectin for use as anti-neovasculature and cancer therapy)

RN 457998-20-8 CAPLUS
CN Antigen PSMA (prostate-specific membrane antigen) (human) (9CI) (CA INDEX NAME)

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L5 ANSWER 4 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:693506 CAPLUS
DOCUMENT NUMBER: 135:268240
TITLE: Secreted and transmembrane polypeptides and human nucleic acids encoding them that are overexpressed in cancerous tissues
INVENTOR(S): Baker, Kevin P.; Chen, Jian; Desnoyers, Luc; Goddard, Audrey; Godowski, Paul J.; Gurney, Austin L.; Pan, James; Smith, Victoria; Watanabe, Colin K.; Wood, William I.; Zhang, Zemin
PATENT ASSIGNEE(S): Genentech, Inc., USA
SOURCE: PCT Int. Appl., 774 pp.
CODEN: PIXXD2
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LANGUAGE: English
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AU	1998-93178	A3	19981002
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US	1999-397342	A1	19990915
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US	1999-162506P	P	19991029
US	1999-164495P	P	19991109
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US	1999-164500P	P	19991109
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WO	1999-US28409	A	19991130
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WO	2000-US4342	A1	20000218
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WO	2000-US5004	A	20000224
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US	2000-522342	B2	20000309
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WO	2000-US6666	A	20000314
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WO	2000-US7532	W	20000321
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WO	2000-US13358	A2	20000515
US	2000-204675P	P	20000517
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US	2000-220624P	P	20000725
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US	2000-220664P	P	20000725
US	2000-220666P	P	20000725
US	2000-220893P	P	20000726
WO	2000-US20710	W	20000728

US 2000-222425P P 20000801

AB The present invention is directed to novel polypeptides and to nucleic acid mols. encoding those polypeptides. Thus, 305 cDNAs encoding human secreted or transmembrane proteins were identified by extracellular domain homol. screening, amylase screening, and signal algorithm anal. These transcripts for these proteins are overexpressed in various cancerous tissues, including adrenal, lung, colon, breast, prostate, rectal, cervical, and liver tumors. Certain of the proteins stimulate release of tumor necrosis factor-α from human blood, and also stimulate proliferation or differentiation of chondrocytes. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide mols. comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

IT **221079-13-6**
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(amino acid sequence; secreted and transmembrane polypeptides and human nucleic acids encoding them that are overexpressed in cancerous tissues)

RN 221079-13-6 CAPLUS

CN Dipeptidase, acetylaspartylglutamate (human clone P1-683/P1-1694 reduced) (9CI) (CA INDEX NAME)

SEQ
```
  1 MWNLLHETDS AVATARRPRW LCAGALVLAG GFFLLGFLFG WFIKSSNEAT
 51 NITPKHNMKA FLDELKAENI KKFLHNFTQI PHLAGTEQNF QLAKQIQSQW
101 KEFGLDSVEL AHYDVLLSYP NKTHPNYISI INEDGNEIFN TSLFEPPPPG
151 YENVSDIVPP FSAFSPQGMP EGDLVYVNYA RTEDFFKLER DMKINCSGKI
201 VIARYGKVFR GNKVKNAQLA GAKGVILYSD PADYFAPGVK SYPDGWNLPG
251 GGVQRGNILN LNGAGDPLTP GYPANEYAYR RGIAEAVGLP SIPVHPIGYY
301 DAQKLLEKMG GSAPPDSSWR GSLKVPYNVG PGFTGNFSTQ KVKMHIHSTN
351 EVTRIYNVIG TLRGAVEPDR YVILGGHRDS WVFGGIDPQS GAAVVHEIVR
401 SFGTLKKEGW RPRRTILFAS WDAEEFGLLG STEWAEENSR LLQERGVAYI
451 NADSSIEGNY TLRVDCTPLM YSLVHNLTKE LKSPDEGFEG KSLYESWTKK
501 SPSPEFSGMP RISKLGSGND FEVFFQRLGI ASGRARYTKN WETNKFSGYP
551 LYHSVYETYE LVEKFYDPMF KYHLTVAQVR GGMVFELANS IVLPFDCRDY
601 AVVLRKYADK IYSISMKHPQ EMKTYSVSFD SLFSAVKNFT EIASKFSERL
651 QDFDKSNPIV LRMMNDQLMF LERAFIDPLG LPDRPFYRHV IYAPSSHNKY
701 AGESFPGIYD ALFDIESKVD PSKAWGEVKR QIYVAAFTVQ AAAETLSEVA
```

L5 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:	2001:472510 CAPLUS
DOCUMENT NUMBER:	135:75731
TITLE:	Identification of HLA binding motifs of prostate cancer antigens for induction of tumor immunity
INVENTOR(S):	Fikes, John; Sette, Alessandro; Sidney, John; Southwood, Scott; Chesnut, Robert; Celis, Esteban; Keogh, Elissa
PATENT ASSIGNEE(S):	Epimmune Inc., USA
SOURCE:	PCT Int. Appl., 252 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2001045728 A2 20010628 WO 2000-US35516 20001220 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
CA 2394741 A1 20010628 CA 2000-2394741 20001220 <--
AU 2001026055 A5 20010703 AU 2001-26055 20001220 <--
EP 1244465 A1 20021002 EP 2000-989560 20001220 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
JP 2003521245 T 20030715 JP 2001-546667 20001220
US 2004037843 A1 20040226 US 2003-168507 20030114
PRIORITY APPLN. INFO.: US 1999-171312P P 19991221
US 2000-633364 A 20000807
WO 2000-US35516 W 20001220

AB The authors disclose motifs and supermotifs for binding to HLA class I and class II mols. of peptide epitopes derived from prostate cancer antigens. The motif-bearing peptides demonstrate immunogenicity for cytotoxic T-cells and helper T-cells to the cognate antigens.

IT **149200-79-3**
RL: PRP (Properties)
(unclaimed sequence; identification of HLA binding motifs of prostate cancer antigens for induction of tumor immunity)

RN 149200-79-3 CAPLUS

CN Glycoprotein PSM (human clone 55A prostate-specific reduced) (9CI) (CA INDEX NAME)

SEQ
1 MWNLLHETDS AVATARRPRW LCAGALVLAG GFFLLGFLFG WFIKSSNEAT
51 NITPKHNMKA FLDELKAENI KKFLYNFTQI PHLAGTEQNF QLAKQIQSQW
101 KEFGLDSVEL AHYDVLLSYP NKTHPNYISI INEDGNEIFN TSLFEPPPPG
151 YENVSDIVPP FSAFSPQGMP EGDLVYVNYA RTEDFFKLER DMKINCSGKI
201 VIARYGKVFR GNKVKNAQLA GAKGVILYSD PADYFAPGVK SYPDGWNLPG
251 GGVQRGNILN LNGAGDPLTP GYPANEYAYR RGIAEAVGLP SIPVHPIGYY
301 DAQKLLEKMG GSAPPDSSWR GSLKVPYNVG PGFTGNFSTQ KVKMHIHSTN
351 EVTRIYNVIG TLRGAVEPDR YVILGGHRDS WVFGGIDPQS GAAVVHEIVR
401 SFGTLKKEGW RPRRTILFAS WDAEEFGLLG STEWAEENSR LLQERGVAYI
451 NADSSIEGNY TLRVDCTPLM YSLVHNLTKE LKSPDEGFEG KSLYESWTKK
501 SPSPEFSGMP RISKLGSGND FEVFFQRLGI ASGRARYTKN WETNKFSGYP
551 LYHSVYETYE LVEKFYDPMF KYHLTVAQVR GGMVFELANS IVLPFDCRDY
601 AVVLRKYADK IYSISMKHPQ EMKTYSVSFD SLFSAVKNFT EIASKFSERL
651 QDFDKSNPIV LRMMNDQLMF LERAFIDPLG LPDRPFYRHV IYAPSSHNKY
701 AGESFPGIYD ALFDIESKVD PSKAWGEVKR QIYVAAFTVQ AAAETLSEVA

L5 ANSWER 10 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:821601 CAPLUS
DOCUMENT NUMBER: 134:4046
TITLE: Monoclonal antibodies specific for the extracellular domain of prostate-specific membrane antigen
INVENTOR(S): Murphy, Gerald P.; Boynton, Alton L.; Holmes, Eric H.; Tino, William Thomas
PATENT ASSIGNEE(S): Northwest Biotherapeutics, Inc., USA
SOURCE: U.S., 39 pp., Cont.-in-part of U. S. Ser. No. 827,017, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6150508	A	20001121	US 1998-44668	19980318 <--
CA 2323096	A1	19990923	CA 1999-2323096	19990318 <--
CA 2323096	C	20041019		
WO 9947554	A1	19990923	WO 1999-US5864	19990318 <--
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RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9931896	A	19991011	AU 1999-31896	19990318 <--
AU 768558	B2	20031218		
EP 1064303	A1	20010103	EP 1999-913932	19990318 <--
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US 6962981	B1	20051108	US 2000-561502	20000428
US 2004024188	A1	20040205	US 2003-428360	20030501

PRIORITY APPLN. INFO.:		
US 1996-621399	B2	19960325
US 1997-827017	B2	19970325
US 1998-44668	A	19980318
WO 1999-US5864	W	19990318
US 2000-561502	A1	20000428

AB The present invention relates to monoclonal antibodies that bind to the extracellular domain of prostate-specific membrane antigen (PSMA), hybridoma cell lines producing the antibodies, and methods of using such antibodies for diagnosis and treatment of cancer. In particular, thirty-five monoclonal antibodies reactive with PSMA expressed on the cell surface are exemplified. Addnl., the present invention relates to a novel protein variant (PSM') of PSMA detected by a number of the antibodies of the invention. The hydrolase activity of PSMA and PSM' allows the use of an immunoenzymic assay for their detection.

IT **149200-79-3 177571-74-3**
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(amino acid sequence; monoclonal antibodies specific to extracellular domain of prostate-specific membrane antigen PSM' variant for diagnosis and prognosis of prostate cancer)

RN 149200-79-3 CAPLUS
CN Glycoprotein PSM (human clone 55A prostate-specific reduced) (9CI) (CA INDEX NAME)

SEQ
```
  1 MWNLLHETDS AVATARRPRW LCAGALVLAG GFFLLGFLFG WFIKSSNEAT
 51 NITPKHNMKA FLDELKAENI KKFLYNFTQI PHLAGTEQNF QLAKQIQSQW
101 KEFGLDSVEL AHYDVLLSYP NKTHPNYISI INEDGNEIFN TSLFEPPPPG
151 YENVSDIVPP FSAFSPQGMP EGDLVYVNYA RTEDFFKLER DMKINCSGKI
201 VIARYGKVFR GNKVKNAQLA GAKGVILYSD PADYFAPGVK SYPDGWNLPG
251 GGVQRGNILN LNGAGDPLTP GYPANEYAYR RGIAEAVGLP SIPVHPIGYY
301 DAQKLLEKMG GSAPPDSSWR GSLKVPYNVG PGFTGNFSTQ KVKMHIHSTN
351 EVTRIYNVIG TLRGAVEPDR YVILGGHRDS WVFGGIDPQS GAAVVHEIVR
401 SFGTLKKEGW RPRRTILFAS WDAEEFGLLG STEWAEENSR LLQERGVAYI
451 NADSSIEGNY TLRVDCTPLM YSLVHNLTKE LKSPDEGFEG KSLYESWTKK
501 SPSPEFSGMP RISKLGSGND FEVFFQRLGI ASGRARYTKN WETNKFSGYP
551 LYHSVYETYE LVEKFYDPMF KYHLTVAQVR GGMVFELANS IVLPFDCRDY
601 AVVLRKYADK IYSISMKHPQ EMKTYSVSFD SLFSAVKNFT EIASKFSERL
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651 QDFDKSNPIV LRMMNDQLMF LERAFIDPLG LPDRPFYRHV IYAPSSHNKY
701 AGESFPGIYD ALFDIESKVD PSKAWGEVKR QIYVAAFTVQ AAAETLSEVA

RN 177571-74-3 CAPLUS
CN Antigen PSMA (prostate-specific membrane antigen) (human extracellular domain-containing fragment) (9CI) (CA INDEX NAME)

SEQ
1 KSSNEATNIT PKHNMKAFLD ELKAENIKKF LYNFTQIPHL AGTEQNFQLA
51 KQIQSQWKEF GLDSVELAHY DVLLSYPNKT HPNYISIINE DGNEIFNTSL
101 FEPPPPGYEN VSDIVPPFSA FSPQGMPEGD LVYVNYARTE DFFKLERDMK
151 INCSGKIVIA RYGKVFRGNK VKNAQLAGAK GVILYSDPAD YFAPGVKSYP
201 DGWNLPGGGV QRGNILNLNG AGDPLTPGYP ANEYAYRRGI AEAVGLPSIP
251 VHPIGYYDAQ KLLEKMGGSA PPDSSWRGSL KVPYNVGPGF TGNFSTQKVK
301 MHIHSTNEVT RIYNVIGTLR GAVEPDRYVI LGGHRDSWVF GGIDPQSGAA
351 VVHEIVRSFG TLKKEGWRPR RTILFASWDA EEFGLLGSTE WAEENSRLLQ
401 ERGVAYINAD SSIEGNYTLR VDCTPLMYSL VHNLTKELKS PDEGFEGKSL
451 YESWTKKSPS PEFSGMPRIS KLGSGNDFEV FFQRLGIASG RARYTKNWET
501 NKFSGYPLYH SVYETYELVE KFYDPMFKYH LTVAQVRGGM VFELANSIVL
551 PFDCRDYAVV LRKYADKIYS ISMKHPQEMK TYSVSFDSLF SAVKNFTEIA
601 SKFSERLQDF DKSNPIVLRM MNDQLMFLER AFIDPLGLPD RPFYRHVIYA
651 PSSHNKYAGE SFPGIYDALF DIESKVDPSK AWGEVKRQIY VAAFTVQAAA
701 ETLSEVA

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:755108 CAPLUS
DOCUMENT NUMBER: 135:13933
TITLE: Prostate-specific suicide gene therapy using the prostate-specific membrane antigen promoter and enhancer
AUTHOR(S): O'Keefe, Denise S.; Uchida, Atsushi; Bacich, Dean J.; Watt, Fujiko B.; Martorana, Anna; Molloy, Peter L.; Heston, Warren D. W.
CORPORATE SOURCE: George M. O'Brien Urology Research Center, Department of Cancer Biology, Cleveland Clinic Foundation, Lerner Research Institute, Cleveland, OH, 44195, USA
SOURCE: Prostate (New York) (2000), 45(2), 149-157
CODEN: PRSTDS; ISSN: 0270-4137
PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Prostate-specific membrane antigen (PSMA) is abundantly expressed in virtually 100% of prostate cancers and metastases. In addition, unlike prostate-specific antigen (PSA), PSMA is upregulated under conditions of androgen deprivation. Therefore, PSMA is an attractive therapeutic target for advanced prostate cancer. Recently, both the promoter and the enhancer driving prostate-specific expression of the PSMA gene were cloned. The authors describe here the anal. of the PSMA enhancer for the most active region(s) and present a way of using the enhancer in combination with the E. coli cytosine deaminase gene for suicide-driven gene therapy that converts the nontoxic prodrug 5-fluorocytosine (5-FC) into the cytotoxic drug 5-fluorouracil (5-FU) in prostate cancer cells. Deletion constructs of the full-length PSMA enhancer were subcloned into a luciferase reporter vector containing either the PSMA or SV-40 promoter. The most active portion of the enhancer was then determined via luciferase activity in the C4-2 cell line. The authors then replaced the luciferase gene with the E. coli cytosine deaminase gene in the subclone that showed the most

luciferase activity. The specificity of this technique was examined in vitro, using the prostate cancer cell line LNCaP, its androgen-independent derivative C4-2, and a number of nonprostatic cell lines. The toxicity of 5-FC and 5-FU on transiently transfected cell lines was then compared. The enhancer region originally isolated from the PSMA gene was approx. 2 kb. Deletion constructs revealed that at least 2 distinct regions seem to contribute to expression of the gene in prostate cancer cells, and therefore the best construct for prostate specific expression was determined to be 1,648 bp long. The IC50 of 5-FC was similar in all cell lines tested (> 10 mM). However, transfection with the 1648 nt PSMA enhancer and the PSMA promoter to drive the cytosine deaminase gene enhanced toxicity in a dose-dependent manner more than 50-fold, while cells that did not express the PSMA gene were not significantly sensitized by transfection. Suicide gene therapy using the PSMA enhancer may be of benefit to patients who have undergone androgen ablation therapy and are suffering a relapse of disease.

IT **221079-13-6**
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(amino acid sequence; prostate-specific suicide gene therapy using the prostate-specific membrane antigen promoter and enhancer)

RN 221079-13-6 CAPLUS
CN Dipeptidase, acetylaspartylglutamate (human clone P1-683/P1-1694 reduced) (9CI) (CA INDEX NAME)

SEQ
```
  1 MWNLLHETDS AVATARRPRW LCAGALVLAG GFFLLGFLFG WFIKSSNEAT
 51 NITPKHNMKA FLDELKAENI KKFLHNFTQI PHLAGTEQNF QLAKQIQSQW
101 KEFGLDSVEL AHYDVLLSYP NKTHPNYISI INEDGNEIFN TSLFEPPPPG
151 YENVSDIVPP FSAFSPQGMP EGDLVYVNYA RTEDFFKLER DMKINCSGKI
201 VIARYGKVFR GNKVKNAQLA GAKGVILYSD PADYFAPGVK SYPDGWNLPG
251 GGVQRGNILN LNGAGDPLTP GYPANEYAYR RGIAEAVGLP SIPVHPIGYY
301 DAQKLLEKMG GSAPPDSSWR GSLKVPYNVG PGFTGNFSTQ KVKMHIHSTN
351 EVTRIYNVIG TLRGAVEPDR YVILGGHRDS WVFGGIDPQS GAAVVHEIVR
401 SFGTLKKEGW RPRRTILFAS WDAEEFGLLG STEWAEENSR LLQERGVAYI
451 NADSSIEGNY TLRVDCTPLM YSLVHNLTKE LKSPDEGFEG KSLYESWTKK
501 SPSPEFSGMP RISKLGSGND FEVFFQRLGI ASGRARYTKN WETNKFSGYP
551 LYHSVYETYE LVEKFYDPMF KYHLTVAQVR GGMVFELANS IVLPFDCRDY
601 AVVLRKYADK IYSISMKHPQ EMKTYSVSFD SLFSAVKNFT EIASKFSERL
651 QDFDKSNPIV LRMMNDQLMF LERAFIDPLG LPDRPFYRHV IYAPSSHNKY
701 AGESFPGIYD ALFDIESKVD PSKAWGEVKR QIYVAAFTVQ AAAETLSEVA
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REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 12 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:742114 CAPLUS
DOCUMENT NUMBER: 133:291987
TITLE: Protein and cDNA sequences of the human prostate-specific membrane antigen-like gene and diagnostic and therapeutic uses thereof
INVENTOR(S): Heston, Warren D. W.; O'Keefe, Denise S.
PATENT ASSIGNEE(S): Sloan-Kettering Institute for Cancer Research, USA
SOURCE: PCT Int. Appl., 75 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2000061605 A1 20001019 WO 2000-US9417 20000407 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
CA 2370033 A1 20001019 CA 2000-2370033 20000407 <--
EP 1177207 A1 20020206 EP 2000-921932 20000407 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
AU 774697 B2 20040701 AU 2000-42189 20000407
US 6897062 B1 20050524 US 2001-973382 20011009
US 2005064504 A1 20050324 US 2004-990840 20041117
PRIORITY APPLN. INFO.: US 1999-128839P P 19990409
WO 2000-US9417 W 20000407
US 2001-973382 A3 20011009

AB The present invention discloses protein and cDNA sequences a novel human gene, termed PSMA-like, that is very similar to the prostate-specific membrane antigen (PSMA) gene and cross-reacts with current detection methods for PSMA. The PSMA-like gene that has been mapped to human chromosome 11q, encodes a new protein that has NAALADase activities. The present invention also provides for a method of distinguishing the PSMA and PSMA-like mRNAs and/or proteins for diagnostic and therapeutic strategies that desire specific targeting of either the PSMA or PSMA-like gene.

IT **301456-02-0**
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(amino acid sequence; protein and cDNA sequences of human prostate-specific membrane antigen-like gene and diagnostic and therapeutic uses thereof)
RN 301456-02-0 CAPLUS
CN Protein PSMA-like (human live prostate-specific membrane antigen-like gene) (9CI) (CA INDEX NAME)

SEQ
```
  1 MGGSAPPDSS WRGSLKVSYN VGPGFTGNFS TQKVKMHIHS TNEVTRIYNV
 51 IGTLRGAVEP DRYVILGGHR DSWVFGGIDP QSGAAVVHET VRSFGTLKKE
101 GWRPRRTILF ASWDAEEFGL LGSTEWAEDN SRLLQERGVA YINADSSIEG
151 NYTLRVDCTP LMYSLVYNLT KELKSPDEGF EGKSLYESWT KKSPSPEFSG
201 MPRISKLGSG NDFEVFFQRL GIASGRARYT KNWETNKFSG YPLYHSVYET
251 YELVEKFYDP MFKYHLTVAQ VRGGMVFELA NSIVLPFDCR DYAVVLRKYA
301 DKIYNISMKH PQEMKTYSLS FDSLFSAVKN FTEIASKFSE RLQDFDKSNP
351 ILLRMMNDQL MFLERAFIDP LGLPDRPFYR HVIYAPSSHN KYAGESFPGI
401 YDALFDIESK VDPSKAWGDV KRQISVAAFT VQAAAETLSE VA
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REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 15 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:613955 CAPLUS
DOCUMENT NUMBER: 131:241983
TITLE: Monoclonal antibodies specific for the extracellular domain of prostate-specific membrane antigen
INVENTOR(S): Murphy, Gerald P.; Boynton, Alton L.; Holmes, Eric H.; Tino, William Thomas
PATENT ASSIGNEE(S): Northwest Biotherapeutics, Inc., USA

SOURCE: PCT Int. Appl., 97 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9947554	A1	19990923	WO 1999-US5864	19990318 <--
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6150508	A	20001121	US 1998-44668	19980318 <--
CA 2323096	A1	19990923	CA 1999-2323096	19990318 <--
CA 2323096	C	20041019		
AU 9931896	A	19991011	AU 1999-31896	19990318 <--
AU 768558	B2	20031218		
EP 1064303	A1	20010103	EP 1999-913932	19990318 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002506629	T	20020305	JP 2000-536745	19990318 <--

PRIORITY APPLN. INFO.:

US 1998-44668	A	19980318
US 1996-621399	B2	19960325
US 1997-827017	B2	19970325
WO 1999-US5864	W	19990318

AB The present invention relates to monoclonal antibodies that bind to the extracellular domain of prostate-specific membrane antigen (PSMA), hybridoma cell lines producing the antibodies, and methods of using such antibodies for diagnosis and treatment of cancer. In particular, thirty-five monoclonal antibodies reactive with PSMA expressed on the cell surface are exemplified. Addnl., the present invention relates to a novel protein variant (PSM') of PSMA detected by a number of the antibodies of the invention. The hydrolase activity of PSMA and PSM' allows the use of an immunoenzymic assay for their detection.

IT **149200-79-3 177571-74-3**
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; monoclonal antibodies specific for the extracellular domain of prostate-specific membrane antigen and hybridomas for diagnosis and treatment of prostate cancer)

RN 149200-79-3 CAPLUS

CN Glycoprotein PSM (human clone 55A prostate-specific reduced) (9CI) (CA INDEX NAME)

SEQ
```
  1 MWNLLHETDS AVATARRPRW LCAGALVLAG GFFLLGFLFG WFIKSSNEAT
 51 NITPKHNMKA FLDELKAENI KKFLYNFTQI PHLAGTEQNF QLAKQIQSQW
101 KEFGLDSVEL AHYDVLLSYP NKTHPNYISI INEDGNEIFN TSLFEPPPPG
151 YENVSDIVPP FSAFSPQGMP EGDLVYVNYA RTEDFFKLER DMKINCSGKI
201 VIARYGKVFR GNKVKNAQLA GAKGVILYSD PADYFAPGVK SYPDGWNLPG
251 GGVQRGNILN LNGAGDPLTP GYPANEYAYR RGIAEAVGLP SIPVHPIGYY
301 DAQKLLEKMG GSAPPDSSWR GSLKVPYNVG PGFTGNFSTQ KVKMHIHSTN
351 EVTRIYNVIG TLRGAVEPDR YVILGGHRDS WVFGGIDPQS GAAVVHEIVR
401 SFGTLKKEGW RPRRTILFAS WDAEEFGLLG STEWAEENSR LLQERGVAYI
451 NADSSIEGNY TLRVDCTPLM YSLVHNLTKE LKSPDEGFEG KSLYESWTKK
501 SPSPEFSGMP RISKLGSGND FEVFFQRLGI ASGRARYTKN WETNKFSGYP
551 LYHSVYETYE LVEKFYDPMF KYHLTVAQVR GGMVFELANS IVLPFDCRDY
601 AVVLRKYADK IYSISMKHPQ EMKTYSVSFD SLFSAVKNFT EIASKFSERL
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651 QDFDKSNPIV LRMMNDQLMF LERAFIDPLG LPDRPFYRHV IYAPSSHNKY
701 AGESFPGIYD ALFDIESKVD PSKAWGEVKR QIYVAAFTVQ AAAETLSEVA

RN 177571-74-3 CAPLUS
CN Antigen PSMA (prostate-specific membrane antigen) (human extracellular domain-containing fragment) (9CI) (CA INDEX NAME)

SEQ
1 KSSNEATNIT PKHNMKAFLD ELKAENIKKF LYNFTQIPHL AGTEQNFQLA
51 KQIQSQWKEF GLDSVELAHY DVLLSYPNKT HPNYISIINE DGNEIFNTSL
101 FEPPPPGYEN VSDIVPPFSA FSPQGMPEGD LVYVNYARTE DFFKLERDMK
151 INCSGKIVIA RYGKVFRGNK VKNAQLAGAK GVILYSDPAD YFAPGVKSYP
201 DGWNLPGGGV QRGNILNLNG AGDPLTPGYP ANEYAYRRGI AEAVGLPSIP
251 VHPIGYYDAQ KLLEKMGGSA PPDSSWRGSL KVPYNVGPGF TGNFSTQKVK
301 MHIHSTNEVT RIYNVIGTLR GAVEPDRYVI LGGHRDSWVF GGIDPQSGAA
351 VVHEIVRSFG TLKKEGWRPR RTILFASWDA EEFGLLGSTE WAEENSRLLQ
401 ERGVAYINAD SSIEGNYTLR VDCTPLMYSL VHNLTKELKS PDEGFEGKSL
451 YESWTKKSPS PEFSGMPRIS KLGSGNDFEV FFQRLGIASG RARYTKNWET
501 NKFSGYPLYH SVYETYELVE KFYDPMFKYH LTVAQVRGGM VFELANSIVL
551 PFDCRDYAVV LRKYADKIYS ISMKHPQEMK TYSVSFDSLF SAVKNFTEIA
601 SKFSERLQDF DKSNPIVLRM MNDQLMFLER AFIDPLGLPD RPFYRHVIYA
651 PSSHNKYAGE SFPGIYDALF DIESKVDPSK AWGEVKRQIY VAAFTVQAAA
701 ETLSEVA

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:766631 CAPLUS
DOCUMENT NUMBER: 130:218945
TITLE: Mapping, genomic organization and promoter analysis of the human prostate-specific membrane antigen gene
AUTHOR(S): O'Keefe, Denise S.; Su, Sai L.; Bacich, Dean J.; Horiguchi, Yutaka; Luo, Ying; Powell, C. Thomas; Zandvliet, Dorothea; Russell, Pamela J.; Molloy, Peter L.; Nowak, Norma J.; Shows, Thomas B.; Mullins, Cami; Vonder Haar, Raymond A.; Fair, William R.; Heston, Warren D. W.
CORPORATE SOURCE: Sloan-Kettering Institute for Cancer Research, Molecular Pharmacology and Therapeutics Division, Urologic Oncology Research Laboratory, Memorial Sloan-Kettering Cancer Center, New York, NY, 10021, USA
SOURCE: Biochimica et Biophysica Acta, Gene Structure and Expression (**1998**), 1443(1-2), 113-127
CODEN: BBGSD5; ISSN: 0167-4781
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Prostate-specific membrane antigen (PSMA) is a 100 kDa type II transmembrane protein with folate hydrolase and NAALAdase activity. PSMA is highly expressed in prostate cancer and the vasculature of most solid tumors, and is currently the target of a number of diagnostic and therapeutic strategies. PSMA is also expressed in the brain, and is involved in conversion of the major neurotransmitter NAAG (N-acetyl-aspartyl glutamate) to NAA and free glutamate, the levels of which are disrupted in several neurol. disorders including multiple sclerosis, amyotrophic lateral sclerosis, Alzheimer's disease and schizophrenia. To facilitate anal. of the role of PSMA in carcinoma we have determined the structural organization of the gene. The gene consists of 19 exons spanning approx.

60 kb of genomic DNA. A 1244 nt portion of the 5' region of the PSMA gene was able to drive the firefly luciferase reporter gene in prostate but not breast-derived cell lines. We have mapped the gene encoding PSMA to 11p11-p12, however a gene homologous, but not identical, to PSMA exists on chromosome 11q14. Anal. of sequence differences between non-coding regions of the two genes suggests duplication and divergence occurred 22 million years ago.

IT **221079-13-6**
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(amino acid sequence; mapping, genomic organization and promoter anal. of the human prostate-specific membrane antigen (PSMA) gene, PSMA antigen displays folate hydrolase and NAALAdase activity)

RN 221079-13-6 CAPLUS

CN Dipeptidase, acetylaspartylglutamate (human clone P1-683/P1-1694 reduced) (9CI) (CA INDEX NAME)

SEQ
```
  1 MWNLLHETDS AVATARRPRW LCAGALVLAG GFFLLGFLFG WFIKSSNEAT
 51 NITPKHNMKA FLDELKAENI KKFLHNFTQI PHLAGTEQNF QLAKQIQSQW
101 KEFGLDSVEL AHYDVLLSYP NKTHPNYISI INEDGNEIFN TSLFEPPPPG
151 YENVSDIVPP FSAFSPQGMP EGDLVYVNYA RTEDFFKLER DMKINCSGKI
201 VIARYGKVFR GNKVKNAQLA GAKGVILYSD PADYFAPGVK SYPDGWNLPG
251 GGVQRGNILN LNGAGDPLTP GYPANEYAYR RGIAEAVGLP SIPVHPIGYY
301 DAQKLLEKMG GSAPPDSSWR GSLKVPYNVG PGFTGNFSTQ KVKMHIHSTN
351 EVTRIYNVIG TLRGAVEPDR YVILGGHRDS WVFGGIDPQS GAAVVHEIVR
401 SFGTLKKEGW RPRRTILFAS WDAEEFGLLG STEWAEENSR LLQERGVAYI
451 NADSSIEGNY TLRVDCTPLM YSLVHNLTKE LKSPDEGFEG KSLYESWTKK
501 SPSPEFSGMP RISKLGSGND FEVFFQRLGI ASGRARYTKN WETNKFSGYP
551 LYHSVYETYE LVEKFYDPMF KYHLTVAQVR GGMVFELANS IVLPFDCRDY
601 AVVLRKYADK IYSISMKHPQ EMKTYSVSFD SLFSAVKNFT EIASKFSERL
651 QDFDKSNPIV LRMMNDQLMF LERAFIDPLG LPDRPFYRHV IYAPSSHNKY
701 AGESFPGIYD ALFDIESKVD PSKAWGEVKR QIYVAAFTVQ AAAETLSEVA
```

REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:628566 CAPLUS
DOCUMENT NUMBER: 125:272758
TITLE: Prostate-specific membrane (PSM) antigen alternatively spliced form, gene promoter sequence, and prostate cancer PCR diagnosis and treatment with peptide derivs.
INVENTOR(S): Israeli, Ron S.; Heston, Warren D. W.; Fair, William R.
PATENT ASSIGNEE(S): Sloan-Kettering Institute for Cancer Research, USA; Israeli Ron S
SOURCE: PCT Int. Appl., 283 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9626272	A1	19960829	WO 1996-US2424	19960223 <--
W: AU, CA, JP, MX, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5935818	A	19990810	US 1995-394152	19950224 <--
US 6953668	B1	20051011	US 1995-466381	19950602

US 7105159	B1	20060912	US 1995-470735	19950602	
CA 2212846	A1	19960829	CA 1996-2212846	19960223	<--
AU 9651725	A	19960911	AU 1996-51725	19960223	<--
AU 717937	B2	20000406			
EP 812356	A1	19971217	EP 1996-908504	19960223	<--
EP 812356	B1	20060208			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE					
JP 2001526522	T	20011218	JP 1996-525821	19960223	<--
AT 317435	T	20060215	AT 1996-908504	19960223	
US 6569432	B1	20030527	US 1996-705477	19960829	
US 7037647	B1	20060502	US 1998-894583	19980223	
US 2004001846	A1	20040101	US 2003-443694	20030521	
US 2004198657	A1	20041007	US 2003-614625	20030702	
US 2004253246	A1	20041216	US 2004-751346	20040102	
JP 2005036008	A	20050210	JP 2004-256270	20040902	
JP 2005052145	A	20050303	JP 2004-256273	20040902	
JP 2005185276	A	20050714	JP 2004-256265	20040902	

PRIORITY APPLN. INFO.:

US 1995-394152	A	19950224
US 1995-466381	A	19950602
US 1995-470735	A	19950602
US 1992-973337	B2	19921105
WO 1993-US10624	A1	19931105
US 1995-403803	A1	19950317
JP 1996-525821	A3	19960223
WO 1996-US2424	W	19960223
US 1996-705477	A1	19960829

AB The invention provides an isolated mammalian nucleic acid mol. encoding a prostate-specific membrane (PSM) antigen that has been alternatively spliced (PSM'). This invention provides an isolated nucleic acid mol. encoding a prostate-specific membrane antigen promoter. This invention provides a method of detecting hematogenous micrometastatic tumor cells of a subject, and determining prostate cancer progression in a subject. Examples include PSM antigen characterization and carboxypeptidase activity, gene mapping to chromosome 11, and PSM antigen effects on prostate cancer mitogenic response to transferrin. Other examples include nested PCR for blood anal. using PSM antigen gene-derived primers. Lymph Node Carcinoma of Prostate cell line was used to clone the PSM antigen gene. Synthesis of neoplasm inhibitors such as N-phosphonoacetyl aspartyl glutamate derivs. is included.

IT **149200-79-3P**

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prostate-specific membrane (PSM) antigen alternatively spliced form, gene promoter sequence, and prostate cancer PCR diagnosis and treatment with peptide derivs.)

RN 149200-79-3 CAPLUS

CN Glycoprotein PSM (human clone 55A prostate-specific reduced) (9CI) (CA INDEX NAME)

SEQ

```
  1 MWNLLHETDS AVATARRPRW LCAGALVLAG GFFLLGFLFG WFIKSSNEAT
 51 NITPKHNMKA FLDELKAENI KKFLYNFTQI PHLAGTEQNF QLAKQIQSQW
101 KEFGLDSVEL AHYDVLLSYP NKTHPNYISI INEDGNEIFN TSLFEPPPPG
151 YENVSDIVPP FSAFSPQGMP EGDLVYVNYA RTEDFFKLER DMKINCSGKI
201 VIARYGKVFR GNKVKNAQLA GAKGVILYSD PADYFAPGVK SYPDGWNLPG
251 GGVQRGNILN LNGAGDPLTP GYPANEYAYR RGIAEAVGLP SIPVHPIGYY
301 DAQKLLEKMG GSAPPDSSWR GSLKVPYNVG PGFTGNFSTQ KVKMHIHSTN
351 EVTRIYNVIG TLRGAVEPDR YVILGGHRDS WVFGGIDPQS GAAVVHEIVR
401 SFGTLKKEGW RPRRTILFAS WDAEEFGLLG STEWAEENSR LLQERGVAYI
451 NADSSIEGNY TLRVDCTPLM YSLVHNLTKE LKSPDEGFEG KSLYESWTKK
501 SPSPEFSGMP RISKLGSGND FEVFFQRLGI ASGRARYTKN WETNKFSGYP
551 LYHSVYETYE LVEKFYDPMF KYHLTVAQVR GGMVFELANS IVLPFDCRDY
601 AVVLRKYADK IYSISMKHPQ EMKTYSVSFD SLFSAVKNFT EIASKFSERL
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651 QDFDKSNPIV LRMMNDQLMF LERAFIDPLG LPDRPFYRHV IYAPSSHNKY
701 AGESFPGIYD ALFDIESKVD PSKAWGEVKR QIYVAAFTVQ AAAETLSEVA

L5 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:77772 CAPLUS
DOCUMENT NUMBER: 124:139522
TITLE: Prostate-specific membrane antigen is a hydrolase with substrate and pharmacologic characteristics of a neuropeptidase
AUTHOR(S): Carter, ruth E.; Feldman, Alexis R.; Coyle, Joseph T.
CORPORATE SOURCE: Dep. Psychiatry, Massachusetts General Hosp.-East, Charlestown, MA, 02129, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (**1996**), 93(2), 749-53
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

AB This report demonstrates that the investigational prostatic carcinoma marker known as the prostate-specific membrane antigen (PSM) possesses hydrolytic activity with the substrate and pharmacol. properties of the N-acetylated α-linked acidic dipeptidase (NAALADase). NAALADase is a membrane hydrolase that has been characterized in the mammalian nervous system on the basis of its catabolism of the neuropeptide N-acetylaspartylglutamate (NAAG) to yield glutamate and N-acetylaspartate and that has been hypothesized to influence glutamatergic signaling processes. The immunoscreening of a rat brain cDNA expression library with anti-NAALADase antisera identified a 1428-base partial cDNA that shares 86% sequence identity with 1428 bases of the human PSM cDNA [Israeli, R. S., Powell, C. T., Fair, W. R. & Heston, W. D. W. (1993) Cancer Res. 53, 227-230]. A cDNA containing the entire PSM open reading frame was subsequently isolated by reverse transcription-PCR from the PSM-pos. prostate carcinoma cell line LNCaP. Transient transfection of this cDNA into two NAALADase-neg. cell lines conferred NAAG-hydrolyzing activity that was inhibited by the NAALADase inhibitors quisqualic acid and β-NAAG. Thus we demonstrate a PSM-encoded function and identify a NAALADase-encoding cDNA. Northern analyses identify at least six transcripts that are variably expressed in NAALADase-pos. but not in NAALADase-neg. rat tissues and human cell lines; therefore, PSM and/or related mol. species appear to account for NAAG hydrolysis in the nervous system. These results also raise questions about the role of PSM in both normal and pathol. prostate epithelial-cell function.

IT **149200-79-3**, Glycoprotein PSM (human clone 55A prostate-specific reduced)
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(prostate-specific membrane antigen is a hydrolase possessing substrate and pharmacol. characteristics of a neuropeptidase)
RN 149200-79-3 CAPLUS
CN Glycoprotein PSM (human clone 55A prostate-specific reduced) (9CI) (CA INDEX NAME)

SEQ
1 MWNLLHETDS AVATARRPRW LCAGALVLAG GFFLLGFLFG WFIKSSNEAT
51 NITPKHNMKA FLDELKAENI KKFLYNFTQI PHLAGTEQNF QLAKQIQSQW
101 KEFGLDSVEL AHYDVLLSYP NKTHPNYISI INEDGNEIFN TSLFEPPPPG
151 YENVSDIVPP FSAFSPQGMP EGDLVYVNYA RTEDFFKLER DMKINCSGKI
201 VIARYGKVFR GNKVKNAQLA GAKGVILYSD PADYFAPGVK SYPDGWNLPG
251 GGVQRGNILN LNGAGDPLTP GYPANEYAYR RGIAEAVGLP SIPVHPIGYY

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 301 DAQKLLEKMG GSAPPDSSWR GSLKVPYNVG PGFTGNFSTQ KVKMHIHSTN
 351 EVTRIYNVIG TLRGAVEPDR YVILGGHRDS WVFGGIDPQS GAAVVHEIVR
 401 SFGTLKKEGW RPRRTILFAS WDAEEFGLLG STEWAEENSR LLQERGVAYI
 451 NADSSIEGNY TLRVDCTPLM YSLVHNLTKE LKSPDEGFEG KSLYESWTKK
 501 SPSPEFSGMP RISKLGSGND FEVFFQRLGI ASGRARYTKN WETNKFSGYP
 551 LYHSVYETYE LVEKFYDPMF KYHLTVAQVR GGMVFELANS IVLPFDCRDY
 601 AVVLRKYADK IYSISMKHPQ EMKTYSVSFD SLFSAVKNFT EIASKFSERL
 651 QDFDKSNPIV LRMMNDQLMF LERAFIDPLG LPDRPFYRHV IYAPSSHNKY
 701 AGESFPGIYD ALFDIESKVD PSKAWGEVKR QIYVAAFTVQ AAAETLSEVA
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L5 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:554861 CAPLUS
DOCUMENT NUMBER: 121:154861
TITLE: Prostate-specific membrane antigen
INVENTOR(S): Israeli, Ron S.; Heston, Warren D. W.; Fair, William R.
PATENT ASSIGNEE(S): Sloan-Kettering Institute for Cancer Research, USA
SOURCE: PCT Int. Appl., 191 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9409820	A1	19940511	WO 1993-US10624	19931105 <--
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2147499	A1	19940511	CA 1993-2147499	19931105 <--
EP 668777	A1	19950830	EP 1994-900538	19931105 <--
EP 668777	B1	20061011		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08506005	T	19960702	JP 1993-511426	19931105 <--
AT 342356	T	20061115	AT 1994-900538	19931105
US 5538866	A	19960723	US 1994-325553	19941018 <--
US 6953668	B1	20051011	US 1995-466381	19950602
US 7105159	B1	20060912	US 1995-470735	19950602
US 7070782	B1	20060704	US 1995-481916	19950607
US 2004198657	A1	20041007	US 2003-614625	20030702
US 2006177450	A1	20060810	US 2005-202940	20050811

PRIORITY APPLN. INFO.:

US 1992-973337	A	19921105
WO 1993-US10624	W	19931105
US 1994-325553	A1	19941018
US 1995-394152	A1	19950224
US 1995-403803	A1	19950317
US 1995-466381	A2	19950602
US 1995-470735	A2	19950602
WO 1996-US2424	A2	19960223
US 1996-705477	A1	19960829

AB The gene encoding a mammalian prostate-specific membrane antigen is cloned and expressed for characterization of the antigen and in the preparation of diagnostic and therapeutic agents. Hematogenous micrometastatic tumor cells can be detected by polymerase chain reaction (PCR) on samples of the subject using primers derived from the antigen gene. Methods to identify ligands of the antigen are described. The antigen was purified immunochem. from cells of lymph node carcinoma of prostate and amino acid sequence-derived primers were used to amplify the RNA from the same cells by degenerate PCR. The amplification product was then used to screen a cDNA bank to obtain a full-length cDNA.

IT **149200-79-3**

RL: BIOL (Biological study)
(nucleotide sequence and cloning and expression of)
RN 149200-79-3 CAPLUS
CN Glycoprotein PSM (human clone 55A prostate-specific reduced) (9CI) (CA INDEX NAME)

SEQ
1 MWNLLHETDS AVATARRPRW LCAGALVLAG GFFLLGFLFG WFIKSSNEAT
51 NITPKHNMKA FLDELKAENI KKFLYNFTQI PHLAGTEQNF QLAKQIQSQW
101 KEFGLDSVEL AHYDVLLSYP NKTHPNYISI INEDGNEIFN TSLFEPPPPG
151 YENVSDIVPP FSAFSPQGMP EGDLVYVNYA RTEDFFKLER DMKINCSGKI
201 VIARYGKVFR GNKVKNAQLA GAKGVILYSD PADYFAPGVK SYPDGWNLPG
251 GGVQRGNILN LNGAGDPLTP GYPANEYAYR RGIAEAVGLP SIPVHPIGYY
301 DAQKLLEKMG GSAPPDSSWR GSLKVPYNVG PGFTGNFSTQ KVKMHIHSTN
351 EVTRIYNVIG TLRGAVEPDR YVILGGHRDS WVFGGIDPQS GAAVVHEIVR
401 SFGTLKKEGW RPRRTILFAS WDAEEFGLLG STEWAEENSR LLQERGVAYI
451 NADSSIEGNY TLRVDCTPLM YSLVHNLTKE LKSPDEGFEG KSLYESWTKK
501 SPSPEFSGMP RISKLGSGND FEVFFQRLGI ASGRARYTKN WETNKFSGYP
551 LYHSVYETYE LVEKFYDPMF KYHLTVAQVR GGMVFELANS IVLPFDCRDY
601 AVVLRKYADK IYSISMKHPQ EMKTYSVSFD SLFSAVKNFT EIASKFSERL
651 QDFDKSNPIV LRMMNDQLMF LERAFIDPLG LPDRPFYRHV IYAPSSHNKY
701 AGESFPGIYD ALFDIESKVD PSKAWGEVKR QIYVAAFTVQ AAAETLSEVA

L5 ANSWER 25 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1993:493193 CAPLUS
DOCUMENT NUMBER: 119:93193
TITLE: Molecular cloning of a complementary DNA encoding a prostate-specific membrane antigen
AUTHOR(S): Israeli, Ron S.; Powell, C. Thomas; Fair, William R.; Heston, Warren D. W.
CORPORATE SOURCE: Urol. Oncol. Res. Lab., Memor. Sloan-Kettering Cancer Cent., New York, NY, 10021, USA
SOURCE: Cancer Research (**1993**), 53(2), 227-30
CODEN: CNREA8; ISSN: 0008-5472
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Recently, a novel Mr 100,000 prostate-specific membrane glycoprotein (PSM) was detected by the prostate-specific monoclonal antibody 7E11-C5, raised against the human prostatic carcinoma cell line LNCaP. The PSM antigen is expressed exclusively by normal and neoplastic prostate cells and metastases. A full-length 2.65-kilobase cDNA encoding the PSM antigen was cloned from a human LNCaP cDNA library by polymerase chain reaction using degenerate oligonucleotide primers. Anal. of the cDNA sequence has revealed that a portion of the coding region, from nucleotide 1250 to 1700, has 54% homol. to the human transferrin receptor mRNA. The deduced polypeptide has a putative transmembrane domain enabling the delineation of intra- and extracellular portions of this antigen. In contrast to prostate-specific antigen and prostatic acid phosphatase which are secreted proteins, PSM as an integral membrane protein may prove to be effective as a target for imaging and cytotoxic targeting modalities.
IT **149200-79-3**
RL: PRP (Properties)
(amino acid sequence of, complete)
RN 149200-79-3 CAPLUS
CN Glycoprotein PSM (human clone 55A prostate-specific reduced) (9CI) (CA INDEX NAME)

SEQ
1 MWNLLHETDS AVATARRPRW LCAGALVLAG GFFLLGFLFG WFIKSSNEAT
51 NITPKHNMKA FLDELKAENI KKFLYNFTQI PHLAGTEQNF QLAKQIQSQW
101 KEFGLDSVEL AHYDVLLSYP NKTHPNYISI INEDGNEIFN TSLFEPPPPG

151 YENVSDIVPP FSAFSPQGMP EGDLVYVNYA RTEDFFKLER DMKINCSGKI
201 VIARYGKVFR GNKVKNAQLA GAKGVILYSD PADYFAPGVK SYPDGWNLPG
251 GGVQRGNILN LNGAGDPLTP GYPANEYAYR RGIAEAVGLP SIPVHPIGYY
301 DAQKLLEKMG GSAPPDSSWR GSLKVPYNVG PGFTGNFSTQ KVKMHIHSTN
351 EVTRIYNVIG TLRGAVEPDR YVILGGHRDS WVFGGIDPQS GAAVVHEIVR
401 SFGTLKKEGW RPRRTILFAS WDAEEFGLLG STEWAEENSR LLQERGVAYI
451 NADSSIEGNY TLRVDCTPLM YSLVHNLTKE LKSPDEGFEG KSLYESWTKK
501 SPSPEFSGMP RISKLGSGND FEVFFQRLGI ASGRARYTKN WETNKFSGYP
551 LYHSVYETYE LVEKFYDPMF KYHLTVAQVR GGMVFELANS IVLPFDCRDY
601 AVVLRKYADK IYSISMKHPQ EMKTYSVSFD SLFSAVKNFT EIASKFSERL
651 QDFDKSNPIV LRMMNDQLMF LERAFIDPLG LPDRPFYRHV IYAPSSHNKY
701 AGESFPGIYD ALFDIESKVD PSKAWGEVKR QIYVAAFTVQ AAAETLSEVA